

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in this application:

## **LISTING OF CLAIMS:**

Claims 1 to 15. (Canceled).

16. (Currently Amended) A sensor element for determining a concentration of a target gas component in a gas mixture, comprising:

a solid electrolyte body;

an external electrode exposed to the target gas component and situated in a first cavity formed in the solid electrolyte body;

an internal electrode situated in the solid electrolyte body;

an electrical resistance heater embedded in an electrical insulation, wherein the electrical resistance heater and the electrical insulation are situated inside the solid electrolyte body, and wherein the electrical resistance heater has a meander-shaped heating surface; and

a second cavity formed in the solid electrolyte body on an opposite side of the solid electrolyte body from the first cavity, the electrical resistance heater being situated between the first cavity and the second cavity;

wherein each of the first cavity and the second cavity has an opening to the outside on opposite sides of the solid electrolyte body.

17. (Previously Presented) The sensor element as recited in Claim 16, wherein the external electrode is situated on the bottom of the first cavity facing away from the outside of the solid electrolyte body.

18. (Currently Amended) The sensor element as recited in Claim 16, ~~wherein the first cavity has an opening to the outside, and~~ wherein the opening of the first cavity is covered by a first cover.

19. (Previously Presented) The sensor element as recited in Claim 18, wherein the first cover is comprised of a gas-permeable, porous material and covers the first cavity.

20. (Previously Presented) The sensor element as recited in Claim 18, wherein at least one gas passage hole leading to the first cavity is provided.

21. (Previously Presented) The sensor element as recited in Claim 20, wherein the at least one gas passage hole is incorporated in one of the solid electrolyte body or in the first cover.

22. (Previously Presented) The sensor element as recited in Claim 16, wherein the second cavity extends over the area of the heating surface.

23. (Currently Amended) The sensor element as recited in Claim 18, wherein the second cavity is provided from the outer side of the solid electrolyte body facing away from the external electrode, and wherein the opening of the second cavity is covered by a second cover.

24. (Previously Presented) The sensor element as recited in Claim 23, wherein the bottom surface of the second cavity opposite the second cover is provided with a coating having low emissivity.

25. (Previously Presented) The sensor element as recited in Claim 24, wherein the coating is made of one of: a) high-melting noble metals; or b) oxides of high-melting noble metals.

26. (Previously Presented) The sensor element as recited in Claim 16, wherein at least one of the first cavity and the second cavity is filled with a highly porous ceramic.

27. (Previously Presented) The sensor element as recited in Claim 23, wherein braces are positioned in each of the first cavity and the second cavity to brace the first cover and the second cover against the bottom of the corresponding first cavity and the second cavity.

28. (Previously Presented) The sensor element as recited in Claim 23, wherein the first cover and the second cover are made of a material having a higher thermal coefficient of expansion than a material of the solid electrolyte body.

29. (Previously Presented) The sensor element as recited in Claim 16, wherein the sensor element is for a wideband lambda sensor, and wherein the internal and external electrodes form a pump cell, and wherein a reference gas channel and a test gas chamber are formed in the solid electrolyte body, the test gas chamber being connected to the first cavity via a diffusion barrier, and wherein the test gas chamber houses the internal electrode and one of a test electrode or a Nernst electrode opposite from the internal electrode, and wherein a reference electrode is situated within the reference gas channel.

30. (Previously Presented) The sensor element as recited in Claim 29, wherein the first and second cavities extend over regions of the internal electrode, the external electrode, the one of the test electrode or the Nernst electrode, and the reference electrode.